Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CW#16 Translations

Geometry

SWBAT translate points up, down left and right in the coordinate plane.

Translations simply mean \_\_\_\_\_\_\_\_\_\_\_\_, without \_\_\_\_\_\_\_\_\_\_\_ of the pre-image.

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| **Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-09-27 at 1.21.22 PM.png** | |
| Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-09-27 at 1.21.26 PM.png | **Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-09-27 at 1.21.30 PM.png** |
| 3. Translation: 4 units left and 7 units up  Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-09-27 at 1.28.15 PM.png | 4. Translation: 6 units left and 7 units down.  **Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-09-27 at 1.28.25 PM.png** |
| **Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-09-27 at 1.24.39 PM.png** | |
| 5.  Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-09-27 at 1.24.43 PM.png | 6.  Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-09-27 at 1.25.04 PM.png |
| 7.  Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-09-27 at 2.18.53 PM.png | 8.  Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-09-27 at 2.19.00 PM.png |

SWBAT translate lines up, down left and right in the coordinate plane.

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| 9. The equation for this line is *y=x - 1*. What would the equation for the line if the line were moved up the y-axis 3 units?  **Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-09-27 at 1.33.04 PM.png** | 10. The equation for this line is *y=-0.5x + 6.* What would be the equation for this line if the line were moved down the x-axis 10 units?  **Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-09-27 at 1.33.09 PM.png** |

\_\_\_\_\_\_\_\_\_ lines are lines that have the same \_\_\_\_\_\_\_, but different \_\_\_\_\_\_\_. ­­­

\_\_\_\_\_\_\_\_\_ lines will never \_\_\_\_\_\_\_\_\_\_.

We symbolize that two lines are parallel by writing: \_\_\_\_\_\_\_\_\_\_ .

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| 11.The equation for the line below is *y = .75x + 8*.  Write the equation for one possible line that is parallel to this line.  What will be true of all lines that are parallel to this line? | 12. The equation for the line below is *y = -2x - 5*.  Write the equation for one possible line that is parallel to this line.  What will be true of all lines that are parallel to this line? |

Challenge Questions:

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| Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-09-27 at 2.05.55 PM.png1. A student was given the image below and asked to translate it 4 units to the left and 5 units down.  The student said the new location of points Z, S, and B will be:  *Z’(-2,0)*  *S’(0,0)*  *B’(-3,-3)*  What are two possible strategies the student used to find the new location of the points?  What mistake do you think the student made, if any? |
| 2.  a) Create an algebratic rule for finding the new location of **any** point, *(x,y)*, given a translation of *a* units left or right, and *b* units up or down.  b) Test your rule on the following translations:  point (-4,-5) translated 5 units up and 6 units left.  Triange with verticies at (0,0), (2,4), and (3,1) translated 6 units down and 3 units right. |